

# CONTAINER FOR DISPOSAL OF SMALL PARTICULATE MATERIALS

## FIELD OF THE INVENTION

The present invention relates to a container for use in co-operation  
5 with a shovel for disposal of small particulate materials of the type which may be readily airborne, for example ash particles.

## BACKGROUND

The use of wood burning fireplaces and stoves is still known in various types of buildings and home, however periodic removal of ash is required to  
10 maintain the wood burning appliance. When removing the ash, the small particulate material is easily airborne when disturbed and accordingly removal of the ash by shovelling the ash into a bucket typically causes clouds of ash to be dispersed into the surrounding room. Once the cloud settles, a messy dust must be cleaned up.

## SUMMARY

15 According to one aspect of the present invention there is provided a container for use with a shovel having an elongate handle and a scoop supported at one end of the handle, the container comprising:

walls surrounding a hollow interior of the container; and

a scoop opening formed in one of the walls which is suitably sized to  
20 receive the scoop therethrough.

By providing a scoop opening suitably sized to fit the scoop in a wall of a container the scoop can be dumped within the hollow interior of the container and withdrawn through the opening with minimum exposure of the dust created by disturbing the particulate material escaping into the surrounding environment. A  
25 gate member in the form of a brush or flap and the like may be provided at the scoop opening to further contain dust within the container. The scoop may be positioned

within the hollow interior through a lip or gate in a side wall which permits access to the interior. When the scoop opening is located in a side wall, a slot may be provided between the scoop opening and the lid or gate which provides access for insertion of the scoop into the hollow interior. In further embodiments the scoop opening and access may be provided in the lid of a container.

According to a second aspect of the present invention there is provided a method of placing material in a container using a shovel having an elongate handle and a scoop supported at one end of the handle, the method comprising:

providing a container including walls surrounding a hollow interior; a scoop opening formed in one of the walls which is suitably sized to receive the scoop therethrough;

gathering the material on the scoop of the shovel;

positioning the scoop in the hollow interior of the container with the handle extending through the scoop opening;

closing the container;

dumping the material in the container; and

withdrawing the scoop from the container through the scoop opening while the container remains closed to substantially contain the material in the container.

There may be provided an access opening in communication with the scoop opening which is arranged to permit the scoop to be located within the hollow interior of the container with the handle extending through the scoop opening without disturbing contents of the scoop.

There may be provided a lid portion and a base portion separable from one another in an open position of the container and being closable at a seam therebetween.

The access opening may comprise a slot extending between the seam and the scoop opening for receiving the handle of the shovel therethrough.

The scoop opening is preferably provided in the base portion.

5 Preferably there is provided a flexible gate member which spans at least part way across the scoop opening to engage the scoop as the scoop is pulled through the scoop opening, for example bristles or a suspended flap of flexible material.

A shelf may project outwardly from the container immediately below the scoop opening.

10 A receptacle may be mounted on an outer side of the walls which has an open top end for receiving the scoop of the shovel therein in storage. A clip may be secured to the wall of the container spaced above the receptacle for selectively securing the handle of the shovel therein.

15 A liner hanger may be supported on the walls on the hollow interior of the container suitable for suspending a liner therefrom below the scoop opening.

The bottom wall of the container may be formed of an insulated fireproof material. The container in general is preferably formed of heat resistant materials which are rigid and fireproof for safely supporting the contents of the container even when hot coals and the like are introduced.

## 20 BRIEF DESCRIPTION OF THE DRAWINGS

In the accompanying drawings, which illustrate exemplary embodiments of the present invention:

Figure 1 is a perspective view of the container according to a first embodiment of the present invention.

25 Figure 2 is a side elevational view of the container according to Figure 1.

Figures 3 and 4 are top plan and front elevational views of the first embodiment of the container.

Figure 5 is perspective view of a further embodiment of the container.

#### DETAILED DESCRIPTION

5 Referring to the accompanying drawings, there is illustrated a container generally indicated by reference numeral 10. The container 10 is particularly useful for disposing of particulate material including fine particles which can be readily airborne for containing dust and airborne particles within the container as the particulate material is dumped therein by means of a shovel 12.

10 The shovel 12 generally comprises a conventional type shovel associated with fireplaces and the like in which an elongate handle 14 is provided supporting a scoop 16 at one end thereof. The container includes a base portion 18 and a lid portion 20 which encloses the base portion when coupled at a seam 22 therebetween. The base portion includes cylindrical side walls 24 and a circular  
15 floor 26 spanning the side walls at the bottom end thereof. The floor 26 is formed of a fireproof material which is insulated to protect flooring upon which the container is supported even when hot coals and the like are received within the container. The side walls 24 terminate at an open top end supporting a gasket 28 thereabout.

The lid portion 20 is circular and is arranged to secure tightly to the  
20 gasket 28 about the open top end of the base portion. Handles 30 are provided on the top of the lid portion 20 and at diametrically opposed positions on the side walls of the base portion. The lid portion 20 permits a hollow interior of the base portion to be enclosed when the lid spans the open top end thereof.

A shovel holder 32 is provided on the outer side of the side walls 24  
25 adjacent the bottom end of the container circumferentially spaced ninety degrees from either of the handles 30 on the side walls. The shovel holder generally

comprises a rectangular receptacle having an open top end and an enclosed bottom to fit the scoop of the shovel therein flat against the side wall with the handle extending upwardly alongside the side wall. A clip 33 is secured to the wall of the container spaced above the receptacle for selectively securing the handle of the  
5 shovel therein.

A scoop opening 34 is provided in the side wall near the open top end, diametrically opposite the shovel holder 32 between the handles 30 of the base portion. The scoop opening 34 includes dimensions which are only slightly larger than the cross sectional dimensions of the scoop of the shovel. The scoop opening  
10 extends horizontally spaced slightly below the open top end and includes a plurality of flexible bristles 36 projecting inwardly from all sides about a periphery of the opening to substantially fully span the opening 34. Accordingly the bristles 36 act as a gate to contain dust within the container as the scoop is withdrawn therefrom.

An access opening is provided in the form of a slot communicating  
15 between the seam of the container at the open top end of the base portion and the scoop opening 34. A corresponding gap is also provided in the gasket 28 about the open top end in which the gap and the slot 38 have a suitable width to only allow passage of the handle of the shovel therethrough. Flexible bristles 36 are also provided adjacent the periphery of the slot 38 to span the opening of the slot again  
20 for containing dust.

A liner hanger 40 is provided on the inner side wall of the container below the scoop opening 34 to suspend a suitable liner within the container. The container may be lined with a foil liner or another liner formed of suitable heat resistant material suspended from the liner hanger as desired.

25 The scoop opening 34 includes a shelf 42 in the form of a flange projecting outwardly from the bottom peripheral edge of the scoop opening 34, either

horizontally or at a slight upward incline away from the side wall, so that particulate material and dust on the bristles would tend to fall on the shelf 44 or back into the container instead of on the floor adjacent the container in the event that any escapes through the scoop opening. Suitable gussets 44 are provided at opposing ends of  
5 the shelf for supporting the shelf.

In the illustrated embodiment the cylindrical shape of the container 10 would be approximately 16 inches in diameter and 18 inches in height. The handles would each comprise a band of material approximately four inches in length and two inches in depth mounted at spaced positions from the side walls approximately five  
10 inches below the open top end. The shovel holder 32 would typically have dimensions of approximately six and a half inches in width and three inches in depth. The scoop opening 34 in the illustrated embodiment would be approximately six and a half inches in the circumferential direction and three and a half inches in height and is located in the side wall approximately four inches below the open top end.  
15 The access opening would typically be a slot in the order of one inch in width.

Turning now to the embodiment of Figure 5, various modifications are illustrated. A step mechanism 46 may be provided for opening and closing a hinged lid. The container itself may be rectangular in shape and supported of wheels 48 for ready transport by a handle 50 spaced above the wheels on a back side of the  
20 container. Access to the scoop opening 34 may be provided by a gate panel 52 directly adjacent the scoop opening and which defines one edge of the scoop opening whereby the scoop opening 34 is simply enlarged for access of the scoop to the interior of the housing when the gate panel is opened. In further embodiments the scoop opening 34 may be provided in the lid when a domed lid or the like is  
25 provided.

In use, ash is removed from a wood burning appliance using the scoop

on the shovel which collects the ash initially. The lid is removed from the container so that the handle portion of the shovel can be inserted through the access opening slot 38 so as to be positioned with the scoop within the hollow interior of the container and the handle projecting through the scoop opening to the exterior of the container. The lid is then closed tightly against the gasket so that disturbing of the ash by dumping the contents of the scoop within the interior of the container does not permit airborne particles to be released into the surrounding environment. After dumping, the shovel is withdrawn through the scoop opening by drawing the scoop through the bristles 36 which are flexed about the scoop for close engagement with the scoop to prevent escape of dust from the container. Once a further scoop of particulate material is collected by the shovel, the lid is again opened with the shovel being inserted down through the access opening slot 38 and the lid closed before dumping of the subsequent scoop of particulate material into the container. This process continues until an area to be cleaned of ash is substantially free of the ash.

While some embodiments of the present invention have been described in the foregoing, it is to be understood that other embodiments are possible within the scope of the invention. The invention is to be considered limited solely by the scope of the appended claims.